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AIRCRAFT IN AGRICULTURE
1958-1963

A list of selected references

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PREFACE

This bibliography contains selected references on agricultural aviation published during 1958-1963. Any articles published during this period but indexed later than 1963 are not included. It supplements Bibliographical Bulletin 8 (covering 1919-1944) and Library List 65 (covering 1945-1957).

Except for the additional feature of an author index, the list is essentially the same in scope and arrangement as Library List 65. It covers the operational and economic aspects of aircraft use in spraying, dusting, seeding, and fertilizing. Many of the references deal with insect control. The compiler sought to include all pertinent citations to agricultural aircraft, their equipment, accessories, and uses, and to techniques and methods of dispersal of chemicals, seeds, and fertilizers.

Many uses of aircraft have been omitted, specifically the use of aircraft in fire control, in aerial surveying and mapping, and for personal and cargo transport. Material dealing only with evaluation of entomological results of spraying or dusting has generally been omitted.

All references except those marked with an asterisk were examined by the compiler.

Abbreviations for the titles of publications cited are the standard ones used by the National Agricultural Library. A complete list will be found on pages 583-614 of U.S. Department of Agriculture Miscellaneous Publication No. 765, List of Serials Currently Received in the Library of the United States Department of Agriculture as of July 1, 1957. The abbreviation "Ref." indicates that the item contains references to literature.

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PRINCIPAL SOURCES CONSULTED

Agricultural and Horticultural Engineering Abstracts, 1958-1963
Agricultural Index, 1958-1963
Applied Science and Technology Index, 1958-1963
Bibliography of Agriculture, 1958-1963
Card Catalogs: Library of Congress; National Agricultural Library
Engineering Index, 1958-1963
Field Crops Abstracts, 1958-1963
Readers Guide to Periodical Literature, 1958-1963

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A List of Selected References

Compiled by Geraldine A. Corridon
Division of Reference
Special Bibliographies Section

GENERAL

1. AERIAL application activity continues to increase gradually. Agr. Chem. 18(9):135-136, 138-139, 179. Sept. 1963. 381 Ag8

Highlights of the Federal Aviation Agency survey for 1960. Report includes information on materials used, hours flown, insect control, plant disease control, weed control, brush control, fertilization, defoliation, seeding, and aircraft utilization.

2. AERIAL application; how much will it expand? Farm Chem. 126(5):14-16, 18, 20, 38, 48, illus. May 1963. 57.8 Am3

Review covers historical development, equipment, costs, and pilots. Includes three tables with flight-hour statistics.

3. AG FLYING progress. J. Agr. Food Chem. 6(5):342-343, illus. May 1958. 381 J8223

Surveys briefly the status quo and outlook of aerial application. Cites statistics, reasons for continued development of operations, disadvantages, and improvements in process.

4. AGRICULTURAL AIRCRAFT PILOTS' AND OPERATORS' SHORT COURSE, 1959. Syllabus of papers presented. Davis, U. Calif., 1959. 266 p. 333 C12

Individual papers cited under respective authors.

5. AGRICULTURAL aviation exhibition. World Crops 11(11):415-416, illus. Nov. 1959. 281.8 W892

Reviews briefly the work of 13 companies, representing various areas of related interest.

6. AGRICULTURAL aviation in Turkey. Agr. Aviation 1(4):92-94, illus. 1959. 333.8 Ag8

Short review of current scope, organization, and operations. Use has been limited to plant protection applications.

7. AGRICULTURAL AVIATION RESEARCH CONFERENCE. Report of the third conference held in Milwaukee, Wisconsin, November 10-11, 1958. Washington, U. S. Agr. Res. Serv., 1959. 84 p. 1.98 R2932

Contents: Sect. 1, Economics and business management; Sect. 2, Weather; Sect. 3, Progress reports and developments in agricultural applications; Sect. 4, Progress reports and developments in forest applications; Sect. 5, Aerial application research. Contains appendices listing research needs, p. 81, and current research on aircraft in agriculture, p. 82-84.

Individual articles are cited under respective authors.

8. AGRICULTURAL chemicals for aerial spraying. Agr. Aviation 2(2):55-64. 1960. 333.8 Ag8

List has three main divisions: Pesticides, fungicides, and herbicides. Includes percentage of active ingredient or application rate for each. Cautionary remark that not all chemicals listed have been approved by authorities in each member country.

9. AGRICULTURAL flying in 1950's characterized by stability and growth. Agr. Chem. 17(1):53-54. Jan. 1962. 381 Ag8

Highlights of Federal Aviation Agency report reflecting statistical data on scope and nature of aerial activities, primarily in 1959.

10. AKESSON, N. B., and YATES, W. E. Aerial application in the U. S. & abroad. Agr. Chem. 14(3):56-57, 124, illus. Mar. 1959. 381 Ag8

Type and scope of operations and research activities in various countries throughout the world.

11. ALABASTER, J. S., and ABRAM, F. S. H. The danger to fisheries from aerial spraying. Internatl. Agr. Aviation Conf. Rpt. 1:355-359. 1959. 333.9 In82

Reports extensive damage in Canada, and points out potential dangerous practices. Discusses toxicity tests, cautioning about their limitations.

12. ALDERDICE, D. F., and WORTHINGTON, M. E. Toxicity of a DDT forest spray to young salmon. Canad. Fish Cult. 24:41-48. Feb. 1959. Dept. Int. Libr.

Series of laboratory tests to determine tolerance of a species of Pacific salmon to aerial spray formulation.

13. AUDIBERT, M. Travaux aeriens agricoles et traitements anticryptogamiques [Agricultural aerial works and anti-cryptogam treatments]. Agriculture [Paris] 24(233):121-124, illus. Apr. 1961. 14 Ag823

Touches on uses of aircraft in agriculture, dangers, costs, equipment, and outlook.

14. BALTIN, F. Wege zur Rationalisierung der aviochemischen Schadlingsbekampfung [Methods of rationalizing aero-chemical spraying]. Deut. Agrartech. 9(2):55-59. Feb. 1959. 58.8 D482

Details of time factors in operations. Diagrams and mathematical equations supplement text.

15. BEDROSOV, Y. Y., and SUDARS, L. P. Aviatsiya v sel'skom khozyaistve [Aviation in agriculture]. Tashkent, Gosudarstvennoe Izdatel'stvo Uzbekskoi SSR, 1962. 48 p., illus. 333 B39

Includes reference to types of aircraft, equipment, and economic aspects of operations.

16. BEREBEROV, D. Selskostopanskata aviatsiya v sotsialisticheskite strani [Agricultural aviation in socialist countries]. Rast. Zashch. 1962(1):18-20. 423.92 So2

For plant protection from pests and diseases.

17. BLACKETT, D. B. Agricultural aviation. Inst. Agr. Engin. J. & Proc. 18(3):109-112. Aug. 1962. 58.9 In7

Basic data. Discussion of current and potential use in United Kingdom.

18. BRADFORD, M. S. Aircraft in agriculture. Agr. Merchant 38(5):61-65; 39(11):57-59, illus. May 1958-Nov. 1959. 10 Ag89

Summarizes the present stage of development and outlook in the British Isles.

Stresses high cost as main detriment to large potential for agricultural aviation in England.

19. BRITT, W. Aerokhimicheskaya sluzhba v sel'skom khozyaistve GDR [Aerochemical service in agriculture of German Democratic Republic]. Mezhdunarod. Sel'skokhoz. Zhur. 5(2):132-141, illus. 1961. 20 M57

Covers use in plant pest control, weed control, and fertilizing. Includes reference to various aircraft and operating equipment.

20. BRITT, W. Flugzeuge in der Land- und Forstwirtschaft [Aircraft in agriculture and forestry]. Berlin, VEB Deutscher Landwirtschaftsverlag, 1960. 164 p., illus. 333 B772

Overall coverage, including historical development, equipment, operations, and uses.

21. BRITT, W. Welchen Entwicklungsstand hat das Flugzeug in der Agrotechnik erreicht? [What level of development has the airplane reached in agricultural technology?]. Deut. Agrartech. 10(4):156-160, illus. Apr. 1960. 58.8 D482

22. BROWN, P. The aeroplane in agriculture. Power Farming Austral. & New Zeal. & Better Farming Digest 67(6):4-5, 113, 115, 117, 119, illus. June 1958. 58.8 P87

Describes design and equipment of aircraft, and discusses operations and uses.

23. BRUSSE, J. C. A look at the Texas A. and M. agricultural aviation research program. Tex. Agr. Aviation Conf. Proc. 9:S1-S3. 1960. 464.4 T31

Possible areas for investigation include: Development of better hardware and techniques to provide more uniform distribution; economic surveys; and pilot training.

24. BURONI, N. E nata l'aviazione agricola [Agricultural aviation is born]. Esso Agr. 9(2): 18-19, illus. June 1960. 58.8 Es7

Helicopter uses, fixed-wing planes, and various types of current aerial operations in Italy.

25. CAMPBELL, D. A. New Zealand's conservation air arm. New Zeal. Agr. Aviation Symp. Proc. 1:9.1-9.6. 1959. 333.9 N48

Points out ways in which services of the aerial Task Force have proved vital in conserving and maintaining basic soil and water resources, and in restoring vegetation. Refers to such operations as top-dressing, seeding, spraying, and distribution of rabbit poison.

26. CARSON, R. Silent spring. Boston, Houghton Mifflin, 1962. 368 p. Ref. 423 C23

Reviews hazards in the use of agricultural chemicals and urges increased use of biological controls instead. Reports on aerial application operations throughout.

List of principal sources, p. 301-355.

27. CLOD, A. VAN. Flugzeuge helfen der Landwirtschaft [Airplanes help agriculture]. ILM; Internatl. Landmaschmarkt. 11(11):353-354, illus. Nov. 1959. 58.8 In83

Significant features of the International Agricultural Aviation Conference held at Cranfield, 1959.

Similar article in Tech. u. Landwirt. 11(21): 496-497, illus. Nov. 10, 1959. 58.8 T223

28. CONGRES INTERNATIONAL DE L'AVIATION AGRICOLE, 2, GRIGNON, 1962. Compte rendu [International Congress of Agricultural Aviation, 2, Grignon, 1962. Report]. Agron. Trop. [Paris] 18(2): 216-219. Feb. 1963. 26 Ag86

English summary.

Review of highlights of congress attended by 170 representatives from 22 countries. Considerable discussion of pesticide treatments. Currently, 11,000 agricultural aircraft in use treat 60 million hectare each year.

29. COPE, O. B., and SPRINGER, P. F. Mass control of insects: The effects on fish and wild life. Ent. Soc. Amer. B. 4(2):52-56. Ref. June 1958. 423.9 En8

Actual and potential harmful effects of extensive aerial applications of chemicals, and resulting responsibilities on economic entomologists. Need for continuing cooperation between entomologists and wildlife biologists.

30. COTTAM, C. Pesticides and wildlife. Tex. Agr. Aviation Conf. Proc. 9:Q1-Q16. Ref. 1960. 464.4 T31

Partial contents: Conservation; Pesticides in relation to wasted resources; Wildlife losses immediately following control; Some indirect and long-term effects; Some field evidence of the effects of control; A possible solution.

Surveys dangers inherent in current situation and suggests use of fewer toxicants and more consideration of biological control methods.

31. DADD, C. V. Aircraft in agriculture. Gt. Brit. Min. Agr. Fisheries & Food. Agriculture 67(4): 203-206. July 1960. 10 G79J

General survey of development to date and expectations for future.

32. DANFORTH, B. Aerial application questions answered by Illinois applicator. Agr. Chem. 13(8):46-47. Aug. 1958. 381 Ag8

Series of questions and answers on such topics as activities of custom applicators, insecticides, costs, techniques, and wind effects.

33. DAVIDSON, J. H. The outlook for aerial application in agriculture as we see it from industry. Tex. Agr. Aviation Conf. Proc. 9:B1-B4. 1960. 464.4 T31

Current scope of aerial application in the agricultural chemical field and ways in which the chemical industry can best serve aerial applicators. Points out importance of using suitable formulations, careful application methods, and employing good equipment.

34. DEVELOPMENT of agricultural aviation. Agr. Aviation 3(4):117-119. 1961. 333.8 Ag8

Importance of research and cooperation in continued planning and growth, and significance of the role played by International Agricultural Aviation Centre.

35. EUROPEAN agricultural group formed. Agr. Chem. 13(9):42. Sept. 1958. 381 Ag8

Purpose, plans, and membership of European Agricultural Aviation Center.

36. EVANGELISTI, A. Aviazione per l'agricoltura; evoluzione dell'aviazione agricola [Aviation in agriculture; the evolution of agricultural aviation]. Macch. & Motori Agr. 19(6):100-102, 104, 106, illus. June 1961. 58.8 M13

Traces development and scope of operations.

37. EVANGELISTI, A. Aviazione per l'agricoltura; l'impiego degli elicotteri agricoli [Aviation in agriculture; the use of helicopters for agriculture]. Macch. & Motori Agr. 19(9):91, 93, 95, 97, 99, illus. Sept. 1961. 58.8 M13

Surveys usage in various countries throughout the world.

38. FACTS and figures the public should know. Aerial Applicator 1(6):8-9. Nov. 1963. 333.8 Ae8

Brief overall review of statistical data, operational activities, advantages, and costs of aerial application in the United States.

39. FARMING by air. Farmers' Wk. 50(9): 100-103, 105, 107, 109, 111, illus. Feb. 27, 1959. 10 F2226

Contents: "The aerial sprayer of the future I think will be a pilotless robot", by W. E. Ripper, p. 100-102; Teamwork keeps them flying, by F. W. Morris, p. 103; Costs must be reduced, by C. V. Dadd, p. 105; One man and his plane went to spray, by C. S. Smith, p. 107, 109; Operation spreading, by P. King, p. 111; The plane for the job, by E. C. S. Little, p. 113.

40. FEDEROV, A. Aviatsiya Vostochnoi Sibiri v bor'be za urozhai [East Siberian aircraft in the struggle for yields]. Sel'sk. Khoz. Sibiri 1959(12): 75-76. Dec. 20 Se492

41. FIFTY years of aerial farming; crop protection from the air. World Crops 11(11):385-389, illus. Nov. 1959. 281.8 W892

Reports material discussed at the first International Aviation Conference. Touches on basic developments in the United States, Great Britain, New Zealand, and other countries. Cites recent trends and outlook.

Includes summaries of papers presented by J. K. Eaton, D. Yeo, R. F. Hill, H. G. Winton, F. C. Porter, N. D. Norman, E. F. Edson, R. Bradbury, and M. Bradford.

42. FUNIKOV, A. Proshloe, nastoyashchee i blizkoe budushchee sel'skokhozyaistvennoi aviatsii [Agricultural aviation in the past, present and near future]. Tekh. v Sel'sk. Khoz. 1962(6):14-16, illus. June. 58.8 M11

43. GALLWITZ, K. Das Flugzeug als Landmaschine [The aircraft as agricultural equipment]. Landtechnik 17(24):840-841. Dec. 15, 1962. 58.8 L235

44. GARCIA, R. C. Algumas notas sobre a actividade da aviacao agricola em Portugal [Notes on agricultural aviation in Portugal]. Agricultura [Lisbon] 11:42-44, illus. Apr./June 1962. 15.5 Ag85

Specific reference to Angola and Mozambique, as well as to continental Portugal.

45. GARNHAM, R. K. Progress and problems in the aerial work industry. Massey Agr. Col. Sheep Farming Annu. 1961:85-92, illus. 45.9 M38S

Economic aspects emphasized. Topdressing discussed.

46. GOODMAN, M. W. Some factors affecting the efficiency, reliability, and the economic operation of fixed-wing aircraft for agricultural purposes. J. A. S. T. Journal 23:39-44. 1961. 65.8 J112

Aerial spraying and fertilizing. Covers data on pilot, aircraft, equipment, and costs.

47. GREENFIELD, I. Agricultural aviation. Pest Technol. Pest Control & Pesticides 1(9):219-222, illus. June 1959. 79.8 P432

Surveys scope and types of activities, importance of formulation, size of droplets, disadvantages of helicopters, and outlook.

48. GUIBERT, L. Agricultural aviation in Argentina. Swath 5(4):8. Jan. 1959. 333.8 Sw2

Brief review of early efforts and current experience, including equipment used, extent of operations, and safety.

49. GUIBERT, L. Some facts about agricultural aviation in Argentine. Agr. Aviation 4(2):55-56. 1962. 333.8 Ag8

General aspects and potential.

50. GUMBRELL, G. E. Agricultural chemicals and their effect on bee keeping. New Zeal. Agr. Aviation Symp. Proc. 1:16.1-16.4. 1959. 333.9 N48

Points out necessity for cooperation among beekeepers, farmers, aerial operators, and all other interested parties in solving problems involved.

51. HATAI, N. Agricultural aviation in Japan. Agr. Aviation 4(2):45-50, illus. 1962. 333.8 Ag8

Review of development and scope of aerial operations since first trial in 1953. Refers to costs and also to new areas of potential applications.

Similar article in Tokyo. Natl. Agr. Sci. Misc. P. 6, 7 p. Mar. 1962. 423.92 T57

52. HENRY, J. E. Summary of second survey on research in engineering areas of agricultural aviation by American Society of Agricultural Aviation, July 1958. Agr. Aviation Res. Conf. Rpt. 3:68-72. 1958, pub. 1959. 1.98 R2932

Based on information received from State and Territorial Agricultural Experiment Stations, U. S. Department of Agriculture, the three Military Services, and commercial firms. Includes suggested research needs.

53. HEWITT, L. G. F. A new industry struggling to establish itself. (Sum.) Farm Mech. 12(129): 173, illus. May 1960. 58.8 B772

Use of aircraft in Great Britain. Emphasizes importance of increased application of topdressing in development of agricultural aviation.

54. HYDE-WYATT, B. H., and HILL, R. F. Agricultural aircraft. London, 1958. 28 p. Ref. 464.4 H99

Partial contents: Advantages of aerial application; Choice of aircraft; Helicopters; Spray equipment; Smoke generators; Economics of aerial spraying. Includes detailed tables listing data about agricultural aircraft currently available.

55. INTERNATIONAL AGRICULTURAL AVIATION CONFERENCE, 1, CRANFIELD, ENG., 1959. Report. The Hague, Internatl. Agr. Aviation Cent., 1959. 429 p. 333.9 In82

Individual articles cited under respective authors.

56. INTERNATIONAL AGRICULTURAL AVIATION CONFERENCE, 1, CRANFIELD, ENG. 1959. Spraying contractors get together and discuss mutual operating problems. Agr. Mach. J. 13(9):30-32, illus. Sept. 1959. 58.8 Ag86

Extracts from some of papers presented: Inaugural address, by M. Thomas; Distribution equipment, by R. F. Hill; Safety precautions, by E. F. Edson; Ground organisation, by R. Bradbury.

56a. *INTERNATIONAL AGRICULTURAL AVIATION CONFERENCE, 2, GRIGNON, FRANCE, 1962. Report. The Hague, Internatl. Agr. Aviation Centre, 1963. 336 p.

46 papers delivered in five sessions. Chiefly in French with English summaries. A few in English with French summaries.

57. ISLER, D. A. Aircraft in agriculture. U. S. D. A. Ybk. Agr. 1960:157-163. 1 Ag84Y

Covers historical development, equipment, operational procedures, uses, design, and problems yet to be solved.

58. JACKS, H. Aerial spraying with therapeutants and fertilizers. Fruit & Prod. 1960:15, 17-18. July. 80 F9427

Discusses characteristics of fungicides, insecticides, and fertilizers: Application, distribution and deposit; preparations of spray mixtures; therapeutants currently used; and fertilizers and nutritional sprays.

59. *JACKSON, A. S., PHILPOTTS, L. E., and CUYLER, R. S. Use of aircraft for forestry, agriculture and related purposes in Canada, 1961. Ottawa, Queen's Printer, 1963. 183 p. Not in Natl. Agr. Libr.

Comprehensive statistical survey of agricultural aviation. Data compiled and analyzed from questionnaires completed by owners of small aircraft as well as by various organizations and authorities in agriculture and forestry.

60. JANNONE, G. Riflessi in Italia e in Liguria della prima Conferenza Internazionale de Aviazione Agricola [Consequences in Italy and Liguria of the first International Conference of Agricultural Aviation.]. Agr. della Spezia 7(11):280-285, illus. Nov. 1959. 16 Ag8229

61. JANNONE, G. Sviluppo e possibilita' d'impiego dell'aviazione agricola in Italia [Development and possibilities of use of agricultural aviation in Italy]. Agr. della Spezia 11(1):9-16. Jan. 1962. 16 Ag8229

62. JANNONE, G. L'uso de elicotteri al servizio dell'agricoltura [The use of helicopters in the service of agriculture]. Prog. Agr. 4(2):225-227, illus. Feb. 1958. 58.8 P94

63. JANSSEN, M. R. Self-analysis of the aerial applicator's business. (Sum.) Agr. Aviation Res. Conf. Rpt. 3:1-5. 1958, pub. 1959. 1.98 R2932

Overall view of a competitive industry. Discusses function of applicator, cost-returns relationship, and selling services to farmers and others. Includes detailed cost tables.

64. KELSEY, J. M. Aerial application of insecticides. New Zeal. Agr. Aviation Symp. Proc. 1:2.1-2.4. 1959. 333.9 N48

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*Not examined

Emphasizes importance of safety precautions and of obtaining conditions reasonably certain to effect control. Discusses control of grass grubs and Porina caterpillars.

65. KEMPE, W. Der Wirtschaftsflug in der Deutschen Demokratischen Republik und seine Perspektiven [Agricultural aircraft in the German Democratic Republic and its prospects]. Wiss.-Tech. Fortschr. f. die Landwirt. 4(2):95-97. Feb. 1963. 18 W763

Interview covering important types of activities carried on in past and at present.

66. KING, P. J. W. The potential for aerial treatments in the United Kingdom. Internatl. Agr. Aviation Conf. Rpt. 1:312-318. 1959. 333.9 In82

Surveys current scope of British agriculture, considering specific areas of operations where aircraft might be utilized to advantage. Includes brief, pertinent data on fruits and vegetables, forests and woodlands, livestock, and marginal and hill land treatments.

67. KONDRAT'EV, P. V. Vertolety v sel'skom khozyaistve [Helicopters in agriculture]. Vsesoyuzn. Obshch. po Rasprostraneniyu Polit. i Nauch. Znanii. [Broshiury-Stenogrammy Lektsii]. (ser. 4) 1960(4): 26-29. 511 M856

68. LAY, D. W. Agricultural chemicals and wildlife. Tex. Agr. Aviation Conf. Proc. 10:S1-S3. 1961. 464.4 T31

Reviews complexity of ecological relationships, urging caution in new programs, especially in aerial applications, to avoid unnecessary hazards to wildlife.

69. LEWIS, W. A. Growth, importance and problems of agricultural aviation. Agr. Chem. 15(6): 70, 111, 113. June 1960. 381 Ag8

Cites shortcomings of existing equipment and chemicals, with suggestions for improvement.

70. LILJEDAHL, L. A. The outlook for aerial application as it looks to research. Tex. Agr. Aviation Conf. Proc. 9:C1-C4. 1960. 464.4 T31

Amount of research currently being conducted; recent new developments pertinent to aerial application; research problems and possible solution to them in the next five to ten years; and problems that will take longer to solve because of their difficulty or lack of funds.

71. LINDSAY, G. G. Aircraft in agriculture. Canterbury. Chamber Com. Agr. B. 348, 4 p. July 1958. 23 C162

Outlines historical development, reviews aerial operations (especially topdressing, seeding, pest control), and discusses types of aircraft used.

72. MAAN, W. J. Agricultural aviation. I-II, World Crops 13(9):343-345; (10):389-390, 394, illus. Sept.-Oct. 1961. 281.8 W892

Contents: I, The development and control of the industry; II, The future of agricultural aviation.

Reports nature and extent of operations in various countries, points out factors influencing development, and discusses optimistic outlook for increased food production throughout the world through extended use of aerial operations.

73. MARIAN, E. E. Agricultural aviation in Israel. Agr. Aviation 5(1):16-21, illus. 1963. 333.8 Ag8

Scope of operations since 1949, aircraft fleet, and types of activities. Includes review also of cloud-seeding trials.

74. MARTELLI, L. Aspetti generali del problema dell'impiego agricolo dell'avio-mezzo in Italia [General aspects of the problem of agricultural use of aircraft in Italy]. Macch. & Motori Agr. 18(9):111-119, illus. Sept. 1960. 58.8 M13

75. *MARTELLI, L. Attuali possibilita operative degli aeromobili nel settore dei trattamenti [Possibilities for aircraft spraying at the present time]. Macchine e Motori Agr. 20(10):51-59, illus. Oct. 1962. Not in Natl. Agr. Libr.

76. MESSENGER, K. Agricultural aviation in the United States of America. Agr. Aviation 2(1): 8-11, illus. 1960. 333.8 Ag8

Survey review emphasizing changing trends. Refers to aircraft types, application of granulated pesticides, methods of aircraft guidance, aerial surveys, brush control, combatting screwworm fly and Mediterranean fruit fly, public relations, education, and research.

77. MONROE, R. E. Can agricultural aviation survive? Agr. Chem. 13(6):49, 119, 121. June 1958. 381 Ag8

Current obstacles of agricultural aviation and necessity for massing strength and wealth by joining the National Aviation Trades Association.

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*Not examined

78. MORANDO, B. Difficolta e prospettive dell'aviazone agricola [Difficulties and prospects for agricultural aviation]. Macch. & Motori Agr. 18(6): 107, 109-111. June 1960. 58.8 M13

79. NAHUM, D. Some factors affecting the economics of agricultural aviation in the United Kingdom. Internatl. Agr. Aviation Conf. Rpt. 1: 319-325. 1959. 333.9 In82

Discusses difficulties limiting aerial applications and summarizes necessary provisions to be included in any reliable, efficient, and profitable operation.

80. NAZAROV, V. A. Aviatsiya v sel'skom khozyaistve sotsialisticheskikh stran [Use of aircraft in agriculture in the countries of the Communist bloc]. Zashch. Rast. ot Vred. i Boleznei 6(9):58-59. Sept. 1961. 421 Z1

81. NEACE, J. F. Applicators must help build strong state and national associations. Agr. Chem. 18(6):72-74. June 1963. 381 Ag8

An appeal to aerial applicators to work together through State associations and the National Aviation Trades Association.

82. NEW ZEALAND AGRICULTURAL AVIATION SYMPOSIUM, 1, WANGANUI, 1959. Wanganui, 1959. Various paging. 333.9 N48

Individual papers cited under respective authors.

83. NICHOLSON, L. A. Aircraft in agriculture. Scot. Agr. 39(3):127-132. Ref. Winter 1959/60. 10 Sco82So

Advantages and disadvantages, costs, developments throughout the world, present use in Britain, and future prospects in Scotland.

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94. ROSE, G. J. Crop protection. Ed. 2, rev. New York, Chemical, 1963. 490 p. 464.4 R72

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95. ROSSIN, M. Les moyens de transport aerien et l'agriculture Outre-Mer [Means of aerial transport and overseas agriculture]. France. Comt. du Mach. Agr. d'Outre-Mer B. de Liaison 1958(12):1-6. May/June. 58.9 F844

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97. SARDONE, L. T. Aerial farming in Australia. World Crops 13(9):339-342. Sept. 1961. 281.8 W892

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99. SCOTT, R. H. Aircraft in agriculture; an assessment of their impact on New Zealand farming. Roy. Aeronaut. Soc. J. 63(585):531-540, illus. Sept. 1959. Libr. Cong.

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100. SCOVILLE, O. J. Research on economic and business-management problems of agricultural aviation. Agr. Aviation Res. Conf. Rpt. 3:73-75. 1958, pub. 1959. 1.98 R2932

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111. TOZER, E. Farmer's air force; industry survey and forecast. Flying 67(2):22-25, 58, illus. Aug. 1960. Libr. Cong.

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113. TUTTLEBY, C. E. The development of an administrative policy on agricultural aviation in Australia. New Zeal. Agr. Aviation Symp. Proc. 1:18.1-18.5. Wanganui, 1959. 333.9 N48

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117. UPCHURCH, M. L., and PHILIPP, P. F. Economics of doing farmwork with airplanes. Agr. Aviation Res. Conf. Rpt. 3:6-10. 1958, pub. 1959. 1.98 R2932

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123. WHEELER, A. H. Future developments in agricultural aviation. Roy. Aeronaut. Soc. J. 65(611):758-761, illus. Nov.1961. Libr. Cong.
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124. WYNN, H. El granjero necesita cada vez mas de la aviacion [The farmer needs aviation more and more]. Agr. Venezol. 24(218):38-39, illus. May/June 1960. 9.95 Ag8
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ECONOMIC AND BUSINESS RELATIONSHIPS

Contract and Custom Work

(See also: 539, 540, 686, 705, 803, 840, 991)

125. AERIAL agriculture; an accepted tool of the farmer, forester, etc. Agr. Chem. 13(9):41,101. Sept. 1958. 381 Ag8
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126. AERIAL crop spraying and dusting costs estimated. Agr. Chem. 14(7):64. July 1959. 381 Ag8

127. AERIAL spraying. Agr. Chem. 13(1): 42-44, 99, illus. Jan. 1958. 381 Ag8
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128. AMERICAN Dusting Company projects one-plane operation to include 11 affiliated distributors. Agr. Chem. 15(12):59, illus. Dec. 1960. 381 Ag8
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129. AMSDEN, R. C. Aerial spraying in Great Britain. Agr. Chem. 14(8):59, 95, 97. Aug. 1959. 381 Ag8
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130. ANDERSON, M. L. Mississippi Delta ag aerial applicators fly by contract. Aerial Applicator 1(7):8-9, illus. Dec. 1963. 333.8 Ae8
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134. CALIFORNIA Agricultural Aircraft Association. Agr. Chem. 13(6):57. June 1958. 381 Ag8
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Contents: 1, The economics of agricultural aviation; 2, The choice of an agricultural aircraft.

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138. 86 MILLION acres covered in 1958 aerial operations. Agr. Chem. 15(8):55, 87. Aug. 1960. 381 Ag8

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139. FITCH, D. R. Some aspects of business management. Tex. Agr. Aviation Conf. Papers. 8:O1-O6. 1959. 464.4 T31

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140. FITCH, D. R. Some thoughts on finance, credit, and collections. Tex. Agr. Aviation Conf. Papers 7:L1-L4. 1958. 464.4 T31

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141. GIESER, A. The use of aircraft in government insect control programs. Tex. Agr. Aviation Conf. Papers 8:R1-R4. 1959. 464.4 T31

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142. GREGERSON, E. E. Services of custom applicators to become increasingly important. Agr. Chem. 17(2):55, 57, 108-109. Feb. 1962. 381 Ag8

Expanded use of aerial applications of agricultural chemicals to meet intensified food production for growing population needs. Advice to applicators about customers, public relations, and precautions.

143. HATFIELD, P. R. The operator's year. Roy. Aeronaut. Soc. J. 66(624):767-769. Dec. 1962. Libr. Cong.

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Formation, activities, and outlook of Illinois Association of Aerial Applicators.

145. INTERNATIONAL AGRICULTURAL AVIATION CONFERENCE, 1, CRANFIELD, ENG., 1959. Air spraying contractors demonstrate fertilizer application techniques. Agr. Mach. J. 13(10):36-37, illus. Oct. 1959. 58.8 Ag86

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Outlines procedure for applicators to follow in personal selling efforts, including specific suggestions for dealing with farmers.

149. NELSON, T. R. The influence of volume and competition on aerial application prices. Agr. Chem. 15(7):58-59, 91, July 1960. 381 Ag8

Costs and market data.

150. NEW IDEAS continue to improve aerial application. Agr. Chem. 18(7):43, 45, 47-48, 77-78, illus. July 1963. 381 Ag8

Actual experience and services of various aerial applicators.

151. NOLEN, L. P. Mercedes dusting service: prompt service & good results. Agr. Chem. 14(5): 54-56, 98-99, illus. May 1959. 381 Ag8

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Financial details, including aircraft, pilot, ground support, marking, overhead and administration, marketing, reserve capacity costs, and possible future developments.

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153. PLOWDEN, J. G. Preparing for future business opportunities. Agr. Chem. 14(12):61-62. Dec. 1959. 381 Ag8

Seven suggestions for aerial applications to increase their operational potential.

154. POU, R. L. Some management musts. Tex. Agr. Aviation Conf. Proc. 12:G1-G15. 1963. 464.4 T31

Principles involved in agricultural aviation. Includes working capital, records, public relations, and quality control.

155. RAZAK, K. A method of analyzing agricultural aircraft operations. Tex. Agr. Aviation Conf. Proc. 10:I1-I37. 1961. 464.4 T31

Details of operations analysis. Importance of swath width, rate of application, and speed. Relationship between design and profit.

156. SPRAY dust survey outlines cost. Aviation Wk. 70(3):109. Jan. 19, 1959. Libr. Cong.

Data furnished by agricultural applicators. Cites typical hourly cost figures.

157. STRATTON, C. L. Farming from the air. Hoard's Dairyman 104(16):851, illus. Aug. 25, 1959. 44.8 H65

Work experience of Delaware custom operator in seeding and dusting.

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158. CALIFORNIA hearings consider petition to ban applications of Sevin dusts. Agr. Chem. 17(5): 28, 103. May 1962. 381 Ag8

Both sides of discussion centering on injury to bees. Warning by Agricultural Aircraft Association to applicator members to comply rigidly with present regulations.

159. CUSTOM applicator the "patsy" in spray damage actions. Agr. Chem. 13(7):49, 89. July 1958. 381 Ag8

160. DOUGLAS, W. O. Dissent in favor of man. Sat. Rev. 43(19):59-60. May 7, 1960. Libr. Cong.

Legal case involving hazards of aerial spraying of DDT in gypsy moth control program.

161. DUGGAN, R. E. Pesticide residues in human and animal foods. Tex. Agr. Aviation Conf. Proc. 9:P1-P4. 1960. 464.4 T31

Basic provisions of legislation governing residues in food. Refers to educational, investigational, and regulatory areas of pesticide residue program.

162. FORSTER, I. W. Insecticides and bees. New Zeal. Agr. Aviation Symp. Proc. 1:17.1-17.6. 1959. 333.9 N48

Scope of work carried on in administering Apiaries Protection Regulations regarding applications of toxic sprays and dusts.

163. HANDLING claims for damages. Agr. Chem. 16(6):55, 57, 101. June 1961. 381 Ag8

Suggestions to applicator regarding legal problems connected with use of agricultural chemicals.

164. HARMS, J. Legal horizon clears for spraying. Farm Chem. 121(7):28, 30, illus. July 1958. 57.8 Am3

Implications of court decision regarding Long Island aerial spraying of DDT in gypsy moth eradication operation.

165. HARMS, J. Spraying on trial. Farm Chem. 121(4):21, 24, illus. Apr. 1958. 57.8 Am3

Pesticide litigation related to aerial chemical spraying programs. Concern regarding future of gypsy moth eradication programs.

166. HENSILL, G. S. Labeling and caution observance. In Agricultural Aircraft Pilots' and Operators' Short Course, 1959. Syllabus of papers presented, p. 53-55. Davis, U. Calif., 1959. 333 C12

Purposes and requirements of labels, government regulations. Reference to continued research and development efforts to improve products and directions for their use.

167. KENNEDY, D. Notes on the legislative control of poisons in New Zealand with particular reference to insecticides. World Health Organ. WHO/Insecticides 132, 20 p. Jan. 1962. 423.92 W89

Includes aerial operations.

168. KENNEDY, D. P. Legislative aspects of the use of agricultural chemicals. New Zeal. Agr. Aviation Symp. Proc. 1:13.1-13.8. 1959. 333.9 N48

Necessary steps for protecting health of pilots and others using agricultural chemicals. Covers instruction and training, labels, personal hygiene, protective clothing and equipment, storage and disposal, medical aspects, and future developments.

Two appendices: Poisons - labelling requirements; and Guide to relevant legislation.

169. MCAULIFFE, J. P. How the Fair Labor Standards Act (wage and hour law) applies to aerial crop dusting. Tex. Agr. Aviation Conf. Proc. 9:O1-O5. 1960. 464.4 T31

Partial contents: Basic provisions; Who is covered; Who is exempt; Some overtime pay problems; What records must be kept; Child labor; Where to obtain information.

170. MCCAUSLAND, J. A. Recent CAA thinking on regulations regarding aerial application. Agr. Aviation Res. Conf. Rpt. 3:10-14. 1958, pub. 1959. 1.98 R2932

Reference to airworthiness of aircraft, speed requirements, and center of gravity limits.

171. MOORE, H. C. 3 problems in aerial application of pesticides: liability legislation, insurance. Farm Chem. 122(10):44, 47, illus. Oct. 1959. 57.8 Am3

Includes suggestions for good public relations by agricultural aircraft industry to help solve problems.

172. NOLEN, L. P. A remedy for problems of aerial applicators. Agr. Chem. 14(6):58-59, 116-117. June 1959. 381 Ag8

Reference to restrictive legislation, taxation, insurance rates, and need for greater public relations effort.

173. PROS and cons of controversial CFR Part 55---Federal legislation vital to aerial applicators. Aerial Appl. 1(2):8-9, 14. July 1963. 333.8 Ae8

In two parts: The pros of Part 55, by D. Teetor, p. 8-9; The cons of Part 55, by G. E. Bullard, p. 9,14.

Opposing opinions by two spokesmen (one representing the National Aviation Trades Association, and the other, the Mississippi Aerial Applicators Association) regarding the proposed Certification and Operating Rules for Agricultural Aircraft Operation.

174. ROLLINS, R. Z. Rules and regulations governing use of agricultural aircraft in California: State. In Agricultural Aircraft Pilots' and Operators' Short Course, 1959. Syllabus of papers presented, p. 264-266. Davis, U. Calif., 1959. 333 C12

Outline covers sale, application, and residue of pesticides.

175. TAYLOR, P. V. Florida's commercial spraymen hear state licensing regulations. Agr. Chem. 15(6):67, 117. June 1960. 381 Ag8

Pro and con opinions on new state regulations requiring licensing of all persons engaged in residental pesticide spraying.

176. TURNER, S. W. Agricultural claims and cases. Tex. Agr. Aviation Conf. Papers. 7:N1-N5. 1958. 464.4 T31

Reviews major types of claims in agricultural aviation; discusses basic rules in investigation of claims; and includes reference to specific cases and decisions.

177. TURNER, S. W. Changes in legal trends affecting agricultural aviation. Tex. Agr. Aviation Conf. Proc. 11:H1-H7. 1962. 464.4 T31

Reviews various cases and court decisions regarding liability of aerial applications.

178. TURNER, S. W. Insurance and claims adjustment. In Agricultural Aircraft Pilots' and Operators' Short Course, 1959. Syllabus of papers presented, p. 255-263. Davis, U. Calif., 1959. 333 C12

In California.

Reviews possible types of claims: Drift, crop injury, noise, nuisance and physical body injury. Also discusses recent legal trends, and hints for insurance coverage and for dealing with claims.

179. TURNER, S. W. Legal responsibilities of herbicide use in forestry. In Symposium [on] Herbicides and Their Use in Forestry, Corvallis, Oreg., 1961. Papers presented, p. 101-111. 1961. 79.9 Sy6

Aerial application in Western States. Discusses regulations, cites cases, and offers suggestions for protection against future contingencies of litigation and financial judgments.

180. TURNER, S. W. Where does the aerial applicator fit? Tex. Agr. Aviation Conf. Proc. 9:R1-R5. 1960. 464.4 T31

Liability of crop dusters for crop contamination, and tolerances under the Food Drug and Cosmetic Act.

EQUIPMENT

Airplanes and Helicopters

(See also: 2, 19, 20, 22, 54, 91, 286)

181. ADVANTAGES of fixed-wing and rotary-wing aircraft in agricultural aerial application - a symposium. Aerial Appl. 1(1):4-6, 14, illus. June 1963. 333.8 Ae8

Contents: Pt. 1, The rotary-wing story, by R. E. Hooper, p. 4, 6, 14; Pt. 2, The fixed-wing story, by G. C. Stephen, p. 5-6, 14.

182. AG-CAT users cite economy. Agr. Chem. 16(9):54, 148, illus. Sept. 1961. 381 Ag8

Includes table reflecting field operational data derived from Grumman survey.

183. AGITATION vital in aircraft spray tanks. Agr. Chem. 16(4):51. Apr. 1961. 381 Ag8

Suggests possible systems to produce effective results.

184. AGRICULTURAL aviation - the international aspect. Aeroplane & Astronautics 97(2500): 239-245, illus. Sept. 18, 1959. Libr. Cong.

Includes six-page review of 36 principal agricultural aircraft of the world.

185. AIRCRAFT and equipment. Agr. Aviation 5(4):125-127, illus. 1963. 333.8 Ag8

Specifications and performance data on Dornier Do 32 (German helicopter) and Wren 460 (airplane).

Each quarterly issue of Agricultural Aviation (1959 to date) contains a section on aircraft and equipment, reporting miscellaneous data on new and existing models throughout the world. Includes such details as manufacturers, specifications, equipment, and operational information.

186. BACH, R. Pilot report: Grumman Ag.-Cat. Flying 72(3):24-25, 62, 64, 66, illus. Mar. 1963. Libr. Cong.

Design features, specifications, and evaluation of flight performance data.

187. BELL helicopter research and development widens rotary wing versatility in aerial application. Aerial Appl. 1(5):4-6, illus. Oct. 1963. 333.8 Ae8

188. BERRY, M. Kellett autogiro production announced. Amer. Helicopter 54(4):10, 13-14, illus. Mar. 1959. Fed. Aviation Agency Libr.

Description and outstanding characteristics of the Cropmaster, to be used in agricultural work.

189. BERTELSEN, W. R. The aeromobile: a peripheral jet vehicle. Agr. Engin. 41(5): 290-292, illus. Ref. May 1960. 58.8 Ag83

New category of aircraft sustaining themselves by pressure created beneath. May be found useful for dusting or spraying crops.

190. BRADBURY, R. Some hazards and techniques involved with helicopter crop spraying. Internatl. Agr. Aviation Conf. Rpt. 1:402-404. 1959. 333.9 In82

Includes comparisons with fixed-wing aircraft.

191. BROWN, D. A. Agricultural aircraft. 1-2. Aviation Wk. & Space Technol. 79(21):116-119, 121-123, 125, 127; (22):112-113, 115, 117-118, illus. Nov. 18-Nov. 25, 1963. Libr. Cong.

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(See also: 114, 211, 351, 352, 369, 388)

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300. ROSE, G. J. Development of concentrate spraying. III. Crop spraying. Pest Technol., Pest Control & Pesticides 3(7):166-173, illus. Ref. Apr. 1961. 79.8 P432

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302. SALMELA, J., DAVIS, A. N., and LEE, R. M. Recent advancements in aerial fogging. Fla. Anti-Mosquito Assoc. Annu. Mtg. Rpt. 33: 42-44. 1962. 420 F663

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303. *SANDERS, G. S. Performance of pumps for agricultural aircraft. Duster 1(4):2, 12, 15-16. Feb. 1960. Not in Natl. Agr. Libr.

304. SHAFER, N. Agricultural aircraft equipment. Nebr. Agr. Expt. Sta. S. C. 104, 16 p. n.d. 100 N27

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305. SHUMAN, F. L. Experimental dust distributor offers less drag and more payload. Agr. Chem. 15(9):55, 103, illus. Sept. 1960. 381 Ag8

Preliminary report on research aimed at faster, cheaper, and more efficient aerial application operations.

306. SOME remarks on aerial spraying. Agr. Aviation 3(3):98-100, illus. 1961. 333.8 Ag8

Boom-and-nozzle apparatus vs. rotating atomizers, and concepts of droplet size, coverage, and distribution in spraying.

307. STAINS, C. S. Insecticide-dispersal apparatus for military-type helicopters. Agr. Aviation Res. Conf. Rpt. 3:41-43. 1958, pub. 1959. 1.98 R2932

Describes HIDAL (Helicopter-Insecticide-Dispersal-Apparatus, Liquid) apparatus, developed specifically to meet Navy and Marine Corps requirments.

308. TAYLOR, R. L. The broadcasting of granular insecticides. New Zeal. Weed Control Conf. Proc. 16:129-132, illus. 1963. 79.9 N213

Methods using ground-based machines and airplanes.

309. TOULSON, R. G. "Swathmaster" wing-type spreader. New Zeal. Agr. Aviation Symp. Proc. 1:7.1-7.5. 1959. 333.9 N48

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310. TRANSLAND Swathmaster all-purpose applicator. Agr. Chem. 13(7):43, illus. July 1958. 381 Ag8

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312. WATKIN, F. Some problems on the installation of aerial agricultural equipment. Internatl. Agr. Aviation Conf. Rpt. 1:225-230. 1959. 333.9 In82

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313. WOOLLEY, D. H. A note on helicopter spray distribution. Agr. Aviation 5(2):43-47, illus. 1963. 333.8 Ag8

Tests using rotating atomizers as source of evenly-sized droplets.

314. YATES, W. E., and AKESSON, N. B. Characteristics of large particle (low drift) aircraft spray dispersing systems. Agr. Aviation Res. Conf. Rpt. 3:76-78. 1958, pub. 1959. 1.98 R2932

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315. YATES, W. E. Principles of aircraft spraying. In Agricultural Aircraft Pilots' and Operators' Short Course, 1959. Syllabus of papers presented, p. 16-27. Davis, U. Calif., 1959. 333 C12

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316. YOUNG, V. D., WINTERFELD, R. C., and DEONIER, C. E. Factors governing the distribution of granular materials from fixed wing aircraft when applied at low flight levels. Tex. Agr. Aviation Conf. Proc. 10:M1-M3. 1961. 464.4 T31

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Evaluation of Distribution of Materials
(See also: 293, 298, 1167)

317. AGULHON, R. Method of adhesive paper control disc in evaluting the spray distribution. Agr. Aviation 4(4):135-136. 1962. 333.8 Ag8

318. AKESSON, N. B. The aircraft as a machine for distributing agricultural materials. In Agricultural Aircraft Pilots' and Operators' Short Course, 1959. Syllabus of papers presented, p. 5-15. Davis, U. Calif., 1959. 333 C12

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319. AKESSON, N. B., and YATES, W. E. Aircraft spraying of the viscous invert emulsion. Calif. Weed Conf. Proc. 12:95-100. 1960. 79.9 C122

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320. AKESSON, N. B., and YATES, W. E. Applying chemicals to avoid drift. Cotton Gin & Oil Mill Press 62(6):26-27. Mar. 18, 1961. 304.8 C822

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321. AKESSON, N. B., and YATES, W. E. The latest on drift residues. Farm Chem. 125(4):44, 46, illus. Apr. 1962. 57.8 Am3

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325. BEACONING in aerial application. Agr. Aviation 1(3):66-70, illus. 1959. 333.8 Ag8

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330. CHAMBERLIN, J. C., and YOUNG, V. D. Distribution of insecticides from fixed-wing aircraft and ground power equipment with special reference to physical and biological factors. Internatl. Cong. Ent. Proc. 10(3):255-260, illus. 1956, pub.1958. 422 C76P

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B. Maksymiuk, D. A. Isler, and T. T. Terrell, joint authors.

Intermountain Forest and Range Experiment Station, Ogden, Utah, cooperating.

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363. MAKSYMIUK, B. Improved holders for spray deposit assessment cards. J. Econ. Ent. 52(5):1029-1030, illus. Oct. 1959. 421 J822

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J. R. W. Miles, R. J. McClanahan, and W. W. Sans, joint authors.

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371. OGAWA, J. M., and YATES, W. E. Effect of volume and variation in droplet size of spray applications from an air-carrier sprayer on control of three almond diseases. Plant Dis. Rptr. 46(8):614-615, illus. Aug. 15, 1962. 1.9 P69P

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374. RAZAK, K. An operations analysis and distributor wing experiments. Agr. Aviation 4(4): 118-130. 1962. 333.8 Ag8

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375. RIDGWAY, R. L. Problems resulting from drift to other crops. Tex. Agr. Aviation Conf. Proc. 11:I1-I7. 1962. 464.4 T31

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377. SCHULTZ, H. B. The wind conditions in California during the spraying season. In Agricultural Aircraft Pilots' and Operators' Short Course, 1959. Syllabus of papers presented, p. 37-39. Davis, U. Calif., 1959. 333 C12

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Distribution of solid materials from single-engine fixed-wing aircraft. Attempt to determine relative importance of various factors involved.

379. SOUTHWELL, P. H. and BASRUR, K. K. A laboratory method of agricultural aviation research using propelled models. Internatl. Agr. Aviation Conf. Rpt. 1:235-237. 1959. 333.9 In82

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380. TAYLOR, R. L. Spray distribution from aeroplanes. New Zeal. Weed Control Conf. Proc. 14:140-146. 1961. 79.9 N213

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381. TILTON, J. E. Pesticides and fisheries. Tex. Agr. Aviation Conf. Proc. 11:L1-L5. 1962. 464.4 T31

Harmful effects on all forms of wildlife of use of pesticides in large-scale agricultural operations. Presents reasons why agricultural pesticides pose threat to fisheries.

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383. WINTERFELD, R. G., and others. Piper PA-25 "Pawnee" distribution patterns. U. S. Agr. Res. Serv. ARS 42-84, 8 p. Sept. 1963. A58.9 R31

V. D. Young, C. E. Deonier, and C. W. Getzendaner, joint authors.

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386. YEO, D. Assessments of rotary atomisers fitted to a Cessna aircraft. Agr. Aviation 3(4): 131-135. 1961. 333.8 Ag8

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388. YEO, D. Drop spectra from rotary brushes fitted to the D. H. Beaver aircraft. Gt. Brit. Colon. Off. Colon. Pesticides Res. Unit. Misc. Rpt. 235, 10 p. June 1959. 423.92 G7922

Limited number of trials measuring performance of rotary brushes.

389. YEO, D. Droplet size distributions from flat-spray nozzles fitted to aircraft. J. Agr. Engin. Res. 4(2):93-99. Ref. 1959. 58.8 J82

Investigation aimed at determining more precise chemical application methods in pest control.

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Tests with aircraft applications to determine dosage distributions achieved under field conditions.

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Significance of shape, size, and density of droplets or particles, windspeed and direction, atmospheric turbulence, and air movements produced by aircraft.

392. YOUNG, V. D., and CHAMBERLIN, J. C. Development and testing of aerial equipment under Pacific Northwest conditions. Agr. Aviation Res. Conf. Rpt. 3:18-21. 1958, pub. 1959. 1.98 R2932

Granular distribution studies and tests for control of green peach aphid on potatoes in Washington.

Maintenance of Aircraft and Engines
(See also: 267, 417, 1137)

393. FOSTER, S. W. G. Corrosion. With especial reference to agricultural chemicals and their effect on aircraft structures and equipment. Internatl. Agr. Aviation Conf. Rpt. 1:276-281. 1959. 333.9 In82

Corrosive effects of specific chemicals on typical samples of aircraft materials. Importance of protective coatings. Use of stainless steel and plastic materials recommended.

394. MARSHALL, T. Corrosion of aircraft structural alloys by agricultural chemicals. New Zeal. Agr. Aviation Symp. Proc. 1:15.1-15.6. 1959. 333.9 N48

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395. NEW FIBERGLASS fuselage covers for Stearmans. Duster 4(1):3-4, illus. Nov. 1963. 333.8 D94

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396. O'BRIEN, K. R. A., and RICE, M. R. Some aspects of the structural airworthiness of agricultural aircraft. Agr. Aviation 5(4):107-113, illus. 1963. 333.8 Ag8

Loading, determination of operating weights, fatigue defects, and corrosion of aircraft. Need for international cooperation in research to solve fatigue problem with agricultural airplanes.

397. PORTER, F. C. Corrosion by agricultural chemicals of airframes and spraying equipment. Internatl. Agr. Aviation Conf. Rpt. 1:260-275. 1959. 333.9 In82

Principles of corrosion, methods of evaluating its effects, corrosion characteristics of various material of construction, corrosion effects of specific agricultural chemicals, and coating systems. Importance of design and maintenance in dealing with problems of corrosion.

398. TEST spray on doped fabric. Agr. Chem. 14(6):65. June 1959. 381 Ag8

Effect of various insecticides on coated fabrics of aircraft.

OPERATIONS

Airstrips, Heliports, and Hangars
(See also: 1202)

399. AN AIRSTRIP for your farm; points which could influence its siting and construction. N. Z. Fert. J. 21:8-9, illus. Dec. 1962. 57.8 N48

Basic requirements and considerations based on 12 years of experience in aerial topdressing. Includes wind conditions, approaches, slope of land, dimensions of strip, fencing, and economic considerations.

400. BULK storage on the farm. N. Z. Fert. J. 21:12-14, illus. Dec. 1962. 57.8 N48

Suggestions for construction and location of bins for storing fertilizer to be used in aerial topdressing operations.

401. MURRAY, J. R. Resurfacing of airstrips; reconstruction and maintenance methods to establish and hold strong turf mat. N. Z. Fert. J. 21:10-11, illus. Dec. 1962. 57.8 N48

Importance of maintaining good airstrips as curb to rising costs of aerial topdressing operations.

402. NAHUM, D. Fertilizer application: ground organization. Internatl. Agr. Aviation Conf. Rpt. 1:425-427. 1959. 333.9 In82

Activity on landing strip, movement of fertilizers on ground, and importance of siting of landing strip.

Pilot Aids and Techniques
(See also: 20)

403. AERIAL topdressing hazard; co-operation of farmers sought in reducing risk. N. Z. Fert. J. 22:21, illus. June 1963. 57.8 N48

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414. CLOSE, P. Illinois spray operators go back to school. Agr. Chem. 13(7):45, 89. July 1958. 381 Ag8

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415. *COBLIJN, J., KERSSEN, M. C., and VAN NOORT, H. R. Handboek voor landbouwvliegers. 's-Gravenhage, Stichting International Landbouwluchtvaart Centrum, 1962.

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421. ISRAELI ag. pilots training at Ohio aviation school. Agr. Chem. 17(3)75. Mar. 1962. 381 Ag8

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435. WHITTAM, D. Aircraft guidance methods for pest control in the United States. Agr. Aviation 4(1):8-15, illus. 1962. 333.8 Ag8

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Safety
(See also: 168, 258)

437. APPLICATOR accidents report shows decline in fatalities. Agr. Chem. 14(1):50, 111. Jan. 1959. 381 Ag8

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438. ARKLEY, G. C. Flight operations. New Zeal. Agr. Aviation Symp. Proc. 1:3.1-3.8. 1959. 333.9 N48

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Recommendations of California Agricultural Aircraft Association prompted by recent outbreak of poisonings from phosphates.

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449. GUREVICH, B. Nekotorye voprosy okhrany zdorov'ya letno-tekhnicheskogo sostava i sel'skokhozyaistvennykh rabochikh pri aviakhimicheskoi obrabotke khlopchatnika [Some questions regarding the health-protection of the flight personnel and agricultural workers when spraying cotton from the air]. Respub. Nauch.-Metodicheskoe Soveschchanie po Primeneniyu Defoliantov, Desikantov i Gerbitsidov v Khlopkov. Mater. 1960:157-159. 1962. 72.9 R31

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458. MILLER, A. W. D. Factors contributing to flight safety in agricultural aviation. Internatl. Agr. Aviation Conf. Rpt. 1:386-389. 1959. 333.9 In82
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464. SAFETY factors in agricultural aviation. Agr. Chem. 16(5):55, 89. May 1961. 381 Ag8
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